



Office for Standards
in Education

Boys' achievement

in secondary schools

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in Education**

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Introduction

1 In 1996 Ofsted published a report entitled *The Gender Divide* which highlighted the gap between the performance of boys and girls. Since then the attainment of boys has continued to lag behind girls in national tests at all ages, although it has narrowed in recent years in Key Stage 1 reading and writing and in Key Stage 2 English. This report follows up some of the issues raised in *The Gender Divide* and identifies approaches used to raise boys' attainment.

2 The sources of evidence include: surveys by Her Majesty's Inspectors (HMI) of maintained and independent secondary schools, specially commissioned additions to section 10 inspections, reviews of data, other reports by Ofsted and similar bodies, and research findings.

3 Ofsted has published a parallel report on boys' writing in English called *Yes he can: schools where boys write well* (2003), which explores that aspect of boys' achievement in greater depth.

Main findings

- When boys enter secondary school they are already well behind girls in English, although they achieve marginally better than girls in mathematics. Except in a small number of schools, the gap does not close during the secondary years. Boys continue to achieve less well than girls in Key Stage 3 tests and General Certificate of Secondary Education (GCSE) examinations.

Improving achievement

- Improving the achievement of boys is a complex matter in which interlinked factors play important parts. They include a positive learning ethos, good teaching and classroom management, close monitoring of individuals and effective support for learning.
- These factors are significant in all schools, whether mixed or single-sex, maintained or independent, and are relevant to girls as well as boys. Senior managers play a crucial role in determining the most appropriate strategy for school improvement, based on close examination of the school situation and identification of the barriers to improving boys' achievement.

Ethos

- The relationship between the ethos of a school and the achievement of its pupils is close. Boys tend to respond well to an ethos that encourages and stimulates high standards, that engages their interest and commitment, and that insists on good behaviour and close partnership with parents.
- Boys perform better in schools which have a strong learning culture and sense of community, and which demonstrably value all pupils by celebrating their achievements and by treating them fairly and with respect. Extra-curricular activities make a significant contribution to boys' views of school.
- The importance of a clearly defined disciplinary framework is especially marked for boys. Boys respond best when there is a consistent and fair-minded approach to discipline, backed up by effective pastoral systems and learning support.

Teaching and classroom management

- Good teaching and classroom management are major factors in all pupils' achievement. Features of good teaching include clear objectives, careful planning that builds on earlier learning, a variety of activities, a sprightly pace, materials that engage all pupils, questioning that promotes understanding, and the appropriate use of praise.
- Boys tend to respond well to teachers who set clear limits and high expectations, direct work strongly, show enthusiasm for their subjects, use humour and reward good work. There is evidence that boys are rather less inclined than girls to learn from indifferent teaching.

- Many of the schools visited in the survey have improved pupils' performance through a whole-school focus on teaching and learning. The focus tends to involve greater use of formative assessment, attention to different learning styles, and structured teaching approaches or a mixed approach. The Key Stage 3 Strategy has been a catalyst for developments in these respects.
- Although there is nothing as clear-cut as a boys' learning style, many schools have found certain approaches to be particularly helpful. For example, although many boys are willing to contribute orally, they can be helped to become more reflective in their replies. Their motivation can be enhanced by giving them greater access to computers for interactive learning or to help them improve the presentation of their work.
- Boys often respond better to lessons that have a clear structure and a variety of activities, including practical and activity-based learning, applications to real-life situations and an element of fun and competition. Many boys find it helpful to be given short-term targets and feedback that focuses on how they can improve.

Strategies focusing on literacy

- In many schools, boys' underachievement is associated with poor skills in the use of language, which is reflected in their performance in GCSE examinations in modern foreign languages, religious education and drama, as well as in English language and literature. Boys achieve notably worse results than girls in National Curriculum English tests at Key Stages 2 and 3.
- Strategies involving intensive support on reading and writing, work on literacy across the curriculum and the careful selection of materials to include those that appeal to boys as well as girls, have often been effective in raising standards.

Alternative curricula

- Disaffection is an issue in many maintained schools. There is evidence that some students can be re-engaged in education through an alternative – generally vocational – curriculum. However, the benefits of vocational learning extend to many pupils and not just the disaffected.
- Inspections of work-based learning suggest that many boys respond well to the environment of a college or workplace, and that the benefits can sometimes spread to school work.

Tracking and supporting pupils' performance

- Effective schools gather and analyse pupil-level data, paying attention to gender and other dimensions. They make use of external benchmarks to compare the performance of pupils and groups with other schools and use internal benchmarks to compare pupil performance with that of previous cohorts. They use baseline data to set targets for pupils and departments that raise expectations, have tracking systems that quickly identify pupils and groups that are underperforming, and make timely interventions.

- Boys in particular seem to value individual attention and tend to work harder when they know they are being monitored closely. They respond well when given help to organise their coursework and to plan their revision. In schools where anti-learning peer pressure is a major barrier to boys' achievement, close monitoring can give boys 'an excuse to succeed'.
- Examples of effective support seen by inspectors include academic reviews by tutors, learning mentors, learning support units, study centres, homework clubs, revision classes, programmes of study skills, access to information and communication technology (ICT), residential programmes and opportunities for work-related learning.

Single-sex schools

- Boys and girls tend to achieve better GCSE results in single-sex schools than in mixed schools, but research suggests that factors such as school type, reputation, history and ethos are also significant.

Organisation in mixed schools

- The effect of single-sex grouping in mixed schools is variable, with some marginal gains reported but other unsuccessful examples.
- Benefits arise from teachers' deliberate control of seating and grouping arrangements and the planning of activities that encourage boys and girls to learn from each other.

Background

Performance gap

4 Differences in the attainment of boys and girls have been of interest to educationalists for more than three decades. Early work in the 1970s was concerned mainly with raising the participation of girls, particularly in mathematics, science and technology. Latterly the concern has shifted to boys.

5 The 1996 Ofsted report *The Gender Divide* (see annex F) provided examples of the differences between girls and boys in their approach to education, and other useful suggestions to help schools improve their practice. The report identified the higher attainment of girls as long-standing.

The gap between girls' and boys' achievement at GCSE has been roughly the same for several years. ... There are statistical difficulties in analysing the O-level and CSE results of the 1980s, but they appear to show that girls were already improving their performance before GCSE was introduced. ... The changes to GCSE criteria affecting the 1994 results, including the reduction of the coursework element, did not immediately reduce the superiority of the girls' performance. (p7)

6 Contemporary inspection evidence showed that about one secondary school in five was weak in meeting the particular needs of one or the other sex. The differences in performance between girls and boys in mixed schools were greater in successful schools than in other schools. The report acknowledged that boys mature more slowly than girls, both physically and socially and identified some consequences. These included boys and girls choosing to work and play separately, and poor behaviour by a minority of boys, with boys being four times as likely to be excluded from school as girls.

7 At GCSE, the gender gap has been apparent for some time, although there are variations among subjects (see annex D). Recent GCSE results show girls doing better than boys in nearly all subjects. Even in a traditionally male area like resistant materials, girls have overtaken the boys at GCSE. Now, it is only in mathematics and science that boys achieve broadly as well as girls. The differences are greatest in English, modern foreign languages, religious education and creative or design-based subjects and, apart from mathematical and scientific subjects, smallest in business studies and physical education. The pattern of attainment has been consistent with Key Stage 3 results, where boys lag behind girls in English, but are roughly level in mathematics and science.

8 There are some signs that the gender gap is narrowing among younger pupils. The gap between boys' and girls' performance in Key Stage 1 reading and writing and in Key Stage 2 English has narrowed slightly in recent years (see annex C).

9 On the other hand, a recent study by Adele Atkinson and Deborah Wilson (see annex F) suggests that the gender gap may widen during Key Stage 4. They compared the 1997 Key Stage 3 results with the same cohort's GCSE results in 1999 and found that the 'added value' for girls was greater than for boys. The latest Key Stage 3 results show that, for boys, the proportion achieving level 5+ in Key Stage 3 English in 2002 is significantly lower than

the proportion who achieved level 4+ in Key Stage 2 English in 1999. Among girls, the two proportions are almost the same, showing that girls make more progress in English in Key Stage 3.

I0 Some schools have bucked the trend for girls to do much better than boys. Ofsted's annual report 1999/2000 (see annex F) stated:

Girls continue to outperform boys across all National Curriculum subjects, but particularly in English, modern foreign languages, art and design and technology. In a minority of schools boys and girls achieve equally well. These schools successfully use a range of strategies, adapted to the needs of boys and girls and of pupils of differing attainment to raise expectations and to promote achievement. (p 12)

I1 An analysis of mixed schools where boys are improving relative to girls, or are achieving nearly as well as girls, offers some support for the suggestions that school size, prior attainment, socio-economic status and ethnicity are important. Compared to national norms, these trend-breaking schools were more likely to have fewer than 700 pupils. Their GCSE results were below average. They have higher proportions of pupils entitled to free school meals, for whom English is an additional language and with statements of special educational needs than the national norms. Unfortunately, in many cases, the relative improvement of boys was due to a decline in GCSE results among girls (see annex E).

I2 The 'gender gap' is an international phenomenon and the perspective provided by the Organisation for Economic Cooperation and Development (OECD) Programme for International Student Assessment (PISA) study (see annex F) suggests the problem is worse in many other countries. On the reading test, boys scored significantly lower than girls in all 27 OECD countries, but only five (South Korea, Mexico, Spain, Portugal and Denmark) had a smaller gap than the United Kingdom. The United Kingdom's gender gap is therefore smaller than the average of OECD countries. In the mathematics and science tests, boys scored higher than girls in many countries, including the United Kingdom, but the differences were not significant.

Causes of boys' underperformance

I3 HMI in Wales undertook a survey of schools in 1996 (see annex F). Among the findings were:

In more than two thirds of the lessons observed, teachers gave too little attention to where boys and girls sat in the classroom. Overall, boy-only groups and pairs within classes were generally less effective than mixed-sex groups and pairs in terms of output, their contribution to the lesson and the complexity of the language they used.

In just over a fifth of lessons, where the quality of teaching was unsatisfactory, girls appeared more able or willing to rise above the indifferent teaching, or at least to extract from it what was of benefit to them. Boys tended to respond more negatively, either through disengagement and indifference or through disruptive behaviour.

Most schools identify, and support through 'mentoring' systems, those pupils who are underachieving and who could achieve a C grade or above at GCSE. In most cases, significantly, more boys than girls have been identified in this way. Such approaches have a positive effect on boys' general attitudes to school life as well as the improvement of their examination performance. (pp3-4)

14 Ofsted's annual report of 2000/01 (see annex F) identified some causes of underperformance, which may affect boys more than girls:

In the schools where pupils' progress is unsatisfactory overall, the most frequent contributory factors are:

- *inadequate attention to literacy and numeracy*
- *pupils' poor attitudes and behaviour*
- *poor, or more often, irregular attendance*
- *weak teaching, sometimes caused or compounded by difficulties in recruiting and retaining staff. (p37)*

15 Debrah Myhill found that gender was a significant element in her study of interaction and response in whole-class teaching (see annex F). She found that underachievers take little part in whole-class teaching episodes and that underachieving boys withdraw from positive class interactions very early in their school careers.

16 The relationship between gender and attainment is complex, as highlighted in the recent research review by Madelaine Arnot et al (1998) (see annex F):

The overwhelming message from research is that there are no simple explanations for the gender gap in performance nor any simple solutions; in any one context several factors are likely to have an influence. For example, the ways in which pupils are grouped, the ways in which their work is assessed, the curricula they encounter, the teaching styles they experience, the role models they are offered, the expectations teachers have of boys and girls and the ways teachers reward and discipline them can all affect the size and nature of the gender gap.

Research also shows that what happens outside school can affect boys' and girls' performance in school. Factors affecting young people's attitudes and motivation include the nature of employment opportunities within the locality of the school, traditional expectations in the community about patterns of 'male' and 'female' employment and perceptions of the relevance of education to future lives and life chances. There is also evidence of a strong 'macho' peer culture that affects some boys' attitudes to schoolwork and homework. (p90)

17 Of course, not all boys are underachieving and not all girls are doing better than their male peers.

18 In their report on educational inequality (see annex F), David Gillborn and Heidi Safia Mirza reinforced the view that ethnicity and class are also important factors, noting that the

gender gap is much smaller than the inequalities of attainment associated with ethnic origin and social class background. For example, boys from an Indian heritage, on average, do better than their Pakistani or Bangladeshi counterparts. Although girls achieve more highly at GCSE than boys of the same ethnic origin, some groups of girls in socially and economically deprived areas are not doing well.

19 The question of social class and peer group culture is prominent in a Teacher Training Agency-funded research study (see annex F) by Keith Shipman and Keith Hicks, teachers in a London school:

The most important factor that prevents the motivation of boys identified by the pupils and teachers alike was the boys' peer group culture. The presence of friends in the group made the boys work less hard. The peer group observed in school was not an anti-work but a pro-social group. ... Within the peer group the boys worked to establish their self-esteem through social interaction not academic performance.

Schools need to be aware that for a small number of boys home background has such a negative effect on motivation and is causing such disruption in their lives that they can be classed as 'pupils under pressure'. For these boys schools need to ensure they have effective systems of support. (p36)

Interventions

20 Schools use a variety of approaches to raise attainment, with variable success. Ofsted's annual report of 2000/01 (see annex F) indicated that few tackle gender issues directly:

Inspectors report few examples in mixed schools of strategies focusing exclusively on the performance of boys. In schools where boys' performance has improved more sharply than the national rate, high expectations, good teaching and close support are the most powerful explanations. Boys tend to benefit proportionately more than girls from intensive support because they are often in the majority in those groups identified to receive it. (p37)

21 In a detailed review of a gender and achievement project in seven West Sussex schools (see annex F), Madelaine Arnot and Jennifer Gubb identified a range of strategies, which they categorised as: targeting boys; raising achievement for all; and pastoral approaches. However, they found that no one of the strategies was conspicuously more successful than the others. Within the schools, departments developed different strategies to improve performance within the specifics of their subjects. The key themes that emerged were broadly consistent with the main findings of this survey on which this report is based.

22 The importance of schools selecting a strategy to suit their own context and ethos is echoed by Laura Suknandan and her colleagues in their report for NFER (see annex F). Suknandan et al studied three types of improvement strategy – single-sex classes, mentoring and additional literacy support – identifying a mixture of advantages and disadvantages for each. They also warn of some pitfalls:

Although strategies such as these provide staff with the opportunity to address the possible causes of gender gaps in performance, they do have a number of implications. Firstly, there is the danger that staff will be encouraged to exploit the differing areas of male and female strengths, rather than address their weaknesses. ... Secondly, given the current popular focus on boys rather than girls, there is a danger that staff will concentrate their efforts and resources into modifying the learning environment to address the needs of boys without necessarily making as much effort to address the needs of girls. ... Thirdly, it is useful to recognise that the idea of modifying teaching approaches and educational environments to match the learning preferences of boys and girls is based on the rather simplistic notion that all boys and all girls have similar learning preferences. (p89)

23 In recent years, Ofsted has reported on other aspects of underachievement. The strategies identified for raising the achievement of particular groups of pupils have many features in common with this report and with each other. For example, reports about Black Caribbean pupils (see annex F), attendance and behaviour (see annex F), and effective city schools (see annex F) draw similar conclusions. They identify the importance of:

- clear leadership and planning, with a well-focused curriculum and reliable systems which work across the school
- valuing and including pupils and setting them the challenge of high expectations
- intensively tracking pupils' progress and providing strong personal support, generous extra-curricular activities and additional teaching
- clear communication with parents
- good teaching and classroom management, clear outcomes for the work and well-defined classroom routines including control of pupils' entry to the classroom and who they sit with.

Single-sex schooling and teaching

24 The effect of single-sex teaching is difficult to separate from other factors. In a review of research on single-sex teaching for girls (see annex F), Jannette Elwood and Carolyn Gipps reported:

- *The better performances of girls' schools are not strictly related to single-sexness but to differences in intake that relate to social class and ability, and the histories and traditions of the schools.*
- *Social class and prior attainment remain the most powerful predictors of educational achievement.*
- *Certain schools show differential effectiveness for certain sub-groups of pupils, with coeducation having a stronger impact on lower-ability boys and girls. (p51)*

25 The factors mentioned in the first point apply also to boys' schools. Caution is therefore needed when interpreting the higher achievement of boys in single-sex schools compared with those in mixed schools.

26 Thomas Spielhofer and his colleagues (see annex F) looked at both school size and the effect of single-sex education. Their findings for secondary schools included the following:

- *Medium-sized schools obtained better results than very large or very small schools.*
- *Girls' schools (but not boys' schools) helped to counter traditional sex-stereotyping in subject choices.*
- *Girls in single-sex comprehensive schools performed better than girls in mixed comprehensives.*
- *Boys of low prior attainment in single-sex comprehensive schools performed better than boys of similar ability in mixed schools.*
- *For boys of middle or higher prior attainment there was no significant difference between single-sex and mixed comprehensives.*
- *Boys in single-sex grammar schools performed better than those in mixed grammar schools. (p48)*

27 Spielhofer et al also caution against reading too much significance into their findings, indicating a number of uncontrolled factors that may be relevant. They also make the point that other outcomes, such as girls' and boys' social and personal development, also need to be considered when deciding what kind of school is best.

28 Research on single-sex grouping in mixed schools does not provide a clear picture about who benefits most, or whether the advantages outweigh the disadvantages. For example, Laura Sukhnandan and her colleagues (see annex F) found that:

At the time of this study, few schools had quantitative evidence to support the use of single-sex classes. However, those which did revealed that single-sex classes were having an initial, positive impact on pupil achievement. The findings from qualitative forms of evaluations, such as feedback from key participants, appeared to support this initial finding. Although these initial, tentative assessments suggested that single-sex classes were having a positive effect on pupil achievement, they also revealed that these classes were not necessarily helping to reduce the gender gap as girls were benefiting as much as boys from being put into single-sex classes. (p39).

29 The disadvantages highlighted by Sukhnandan include pupils being deprived of the perspective of the opposite sex in discussions, timetabling and setting issues and the reluctance of some staff to teach all-boy, low-attaining classes because of their behaviour. Shipman and Hicks (see annex F) tried single-sex teaching with low-ability boys in science, and found that negative peer group pressure was a serious issue.

30 Few mixed schools have implemented single-sex grouping over a sustained period. In a detailed study of one school, Mike Younger and Molly Warrington observed that achievement had improved over the years for boys and girls, yet the majority of teachers did not plan explicitly for the gender composition of their classes. They conclude that:

Whilst single-sex classes seem, on the evidence of this case study, to have the potential to raise the achievement levels of both girls and boys, it is difficult to justify such a mode of organisation if different teaching and assessment approaches are not going to be explicitly explored and implemented. The potential of the system will only be maximised when differential approaches to the teaching of boys' classes and girls' classes are systematically planned, and explicitly implemented, monitored and evaluated through time. (p371)

31 Perhaps the final word on this topic should go to Elwood and Gipps:

The general conclusion from this review is that there is no conclusive evidence to suggest that single-sex schooling is better than co-educational schooling. Too many variables are involved to support such a suggestion. (p55)

The survey

Schools in the survey

32 The survey was based on:

- visits by HMI to 20 maintained secondary schools that appeared to be doing well in raising the attainment of boys at GCSE, to look at their approaches to raising attainment
- visits by HMI to 18 independent schools (five boys', five girls' and eight mixed), to compare their approach to raising attainment
- evidence from specially enhanced Ofsted inspections of 15 schools (seven boys' and eight mixed) in autumn 2001 and spring 2002, during which inspectors were asked to evaluate the strategies used to raise boys' attainment
- evidence from other Ofsted inspections
- analysis of GCSE performance.

33 The survey began by identifying some 200 maintained secondary schools that appeared to doing well to raise the attainment of boys at GCSE. Based on GCSE data for the three years from 1996 to 1999, schools were selected if boys' results were improving faster than girls'. The analysis considered the average points score and the proportions of pupils gaining 5+ A*-C and 5+ A*-G grades. A similar analysis was carried out among independent schools for the purpose of comparison.

34 The sample of schools visited included schools of various sizes, ethnic diversity and location in both advantaged and disadvantaged areas, although the latter predominated among the maintained schools. Inspectors focused on the strategies schools use, both inside and outside the classroom, to raise boys' attainment. They gathered data on pupils at entry, although these data were not always neatly available by gender, and analysed attainment at the end of Key Stage 3 in English, mathematics and science. They observed lessons, examined pupils' work, scrutinised school documents and held discussions with the headteacher, other staff and groups of boys.

Inspection findings

35 The role of the senior management is crucial in developing a strategy for improvement that takes into account the context and specific needs of the school. The strategy might involve a whole-school focus on teaching and learning, on improving the ethos or on increasing learning support, but is more likely to involve a package of measures. Sensitive leadership is often needed to raise the expectations of pupils among staff, parents and the pupils themselves.

In a school where there is a culture of school improvement an annual review recognised progress made in raising boys' achievement but concluded that further development was required. Following the

review, the headteacher presented staff with a range of measures designed to take the work forward:

- *further staff training on boys' preferred learning styles*
- *increased modularisation of the Key Stage 3 curriculum, to provide short-term learning goals and regular feedback on progress*
- *increased liaison with further education colleges to widen the range of the curriculum*
- *use of data analyses to give pupils more feedback on expected targets in a national context*
- *an emphasis on positive male role models as mentors for pupils*
- *working towards Business and Enterprise specialist school status.*

Ethos

36 The most effective schools had created a positive learning environment where peer pressure worked for them. Pupils responded positively to an ethos that encouraged and stimulated high standards. Effective schools engaged the interests and commitment of pupils, insisted on good behaviour and worked in close partnership with parents. Such schools demonstrably valued all pupils by celebrating their achievements and by treating them fairly and with respect.

In a multi-ethnic community college with many students from socially and economically disadvantaged backgrounds, the harmony and good relationships showed that many aspects of social inclusion were successful. Pupils with English as an additional language were integrated, provided for well and achieved well. Somali boys achieved particularly well. The overall community dimension of the college's work had done much to encourage families of ethnic minorities to feel that they had a stake in education.

37 An ethos in which learning was expected and encouraged was a common feature of schools where boys were achieving well. In schools where boys achieved well in relation to girls, there was often a strong sense of belonging to a school community with a well-established culture of learning. In some cases, including all the independent schools, the positive ethos was long established and taken for granted by the pupils and staff.

38 Inspectors found a number of common features that helped schools to establish or maintain a positive ethos:

- high expectations of work and behaviour
- an emphasis on learning, including links to higher education.

In one school, the senior management team was shocked by a previous inspection that identified an anti-learning sub-culture developing amongst the boys. As a result they provide teachers with training on styles of teaching and provision for boys. Since then the quality of teaching had improved and boys' attainment was better in a number of departments.

- strong pastoral and learning support systems that ensured that pupils were valued and given good support or learning
- a wide range of extra-curricular and subject-related activities
- a good classroom atmosphere, based on cordial relationships between teachers and pupils, with humour often used to good effect so that learning was fun
- parental support and good communication with parents

One school set out to raise expectations in the local community, in partnership with primary schools. From Year 6 onwards, high expectations of GCSE success and progression into post-16 education were promoted in parent information evenings. A deliberate attempt was made to get parents thinking about higher education. These expectations were reinforced at curriculum evenings and prize-giving ceremonies throughout the year.

- the celebration of all forms of success, through praise, newsletters and prize evenings and by using past pupils as role models
- the creation of a climate where intellectual endeavour was not second to sport – for example, boys responded particularly well to the national mathematics challenges, which offer non-standard, multiple-choice questions that encourage deeper thought and risk-taking.

39 The connection between academic success and the breadth of the school's range of activities was frequently commented upon by pupils and staff. Boys in particular felt there was more to school than just lessons, and talked of the positive effects of a wide range of extra-curricular activities. Such activities help create a sense of belonging to the school, enhancing boys' motivation and attitudes to work.

40 A feature of the schools where boys were doing well was the consistent approach to behaviour, which was very clear to staff and pupils alike. These schools took positive steps to increase the motivation and ambition of pupils and provided a secure environment welcomed particularly, but not only, by boys.

41 The emphasis was on high expectations and learning rather than just behaviour management. The boys understood their schools' values and knew what was expected of them in terms of behaviour and the standard of their work. Discipline codes were known to all and applied rigorously and fairly. Many schools used praise and rewards to good effect.

One school made good use of the 'assertive discipline' strategy, particularly in terms of rewards. Pupils, and boys in particular, spoke very warmly of the value they placed upon the rewards and the motivation that they produced. Pupils, again especially boys,

described the system as fair – they recognised and accepted the need for punishment and most were keen to avoid it.

42 In maintained schools, teachers often felt that boys' behaviour was more difficult to handle than that of girls. However, the boys' perception was that teachers were harder on them than girls, and let girls get away with more. In the best lessons, behaviour was well managed, discipline was fair and rewards and praise were used frequently. There were difficulties in schools where teachers did not make the boundaries clear and seemed to have insufficient knowledge of the pupils they taught. There were rarely any differences in relation to the gender of the teacher.

43 In a few schools, most notably those with a high proportion of boys (60% or more), there were signs of an anti-learning or 'laddish' culture among some low-attaining boys. Other schools had successfully countered the anti-learning culture to establish a more positive climate in which it was considered acceptable for boys to do well.

Very good provision had been made for staff development and training included training days in behaviour management for all staff and regular meetings of working parties. Staff commented on how different the school feels, with a much better ethos from the boys. By getting all staff to be positive in their relationships with pupils, staff could now persuade pupils to remove their baseball caps without sparking a major incident. Poor behaviour had become the exception rather than the rule. The school had clearly linked the issue of behaviour management with its programme to improve teaching and learning, and its policy to praise and reward students for good work and behaviour.

44 The inspection visits included interviews with pupils in each school, mostly boys. Those interviewed considered girls generally to be more conscientious and neat in their work. They felt that boys responded better when they were challenged in the work. The boys liked knowing what they were going to learn and welcomed help with structuring their work. They were also better motivated when teachers assessed their work, analysed the results and fed back with targets for improvement.

The science department at one school undertook research relating to raising boys' achievement. They found that the boys needed to feel that they were achieving, but they often preferred praise to be given privately.

45 In the independent schools it was widely evident that pupils, boys as much as girls, accepted that they were at school to learn, and for the most part were keen to do so. The vast majority of pupils were also well adjusted, well behaved and responsible. This made it relatively easy for teachers, tutors and the school generally to deal with the few who were not. The disciplinary systems tended to favour encouragement rather than sanctions, and were focused more strongly on informal praise and, where needed, criticism of individual pupils by individual staff, rather than on elaborate systems.

46 First-hand observation and the testimony of pupils, particularly those who had transferred from the maintained sector, point to several contributory factors that are characteristic of most independent schools but not universal in the maintained sector: supportive parents, well-motivated pupils, relatively small classes, good accommodation and plentiful resources. The visits indicated that the pupils' and parents' attitudes were the most

consistently relevant factors. The independent schools acknowledged the strong contribution of parental support to GCSE success. The pupils felt accountable to their parents for the investment made in their education.

Teaching and classroom management

47 Good teaching and management of learning were the strongest influences on achievement and improvement in the schools visited. Inspectors found evidence that the quality of teaching was a stronger factor for boys than for girls. While girls often manage to learn despite lacklustre teaching, the matter may be more critical for boys. There is some evidence that boys are more likely than girls to become disruptive or to give up when faced with a teacher they do not respect.

A science department undertook research on boys with low Key Stage 3 English levels but above average non-verbal reasoning scores. They found that these boys performed well on modular Key Stage 4 science tests, especially where multiple-choice questions were used, suggesting that their scientific knowledge was sometimes concealed by literacy problems. It was noted that these boys performed better with teachers whom they rated highly and the department developed the notion, as one model, of teacher being seen as 'top boy'. However, it was noted that much care was needed to avoid creating the wrong image.

In interviews with inspectors, boys said that they respond better when they are challenged in the work and stressed the importance of teachers being firm but fair in the classroom.

48 Boys in particular responded well to carefully structured work in lessons. Their responses were strongest when the work had clear objectives, when it was set in real-life contexts, and when it involved well-focused short-term tasks on which there was quick feedback. They also reacted very favourably when the work had an element of fun and competition. Girls appreciated and responded to these features as well, but, in the lessons seen, girls responded better than boys when these features were not prominent.

In one school where teaching was particularly strong, teachers managed pupils well, noting that when boys were more dominant they targeted the girls and vice versa. They varied the required outcomes so boys and girls had a chance to use the methods of working that they preferred. The teachers did not have stereotypical views on how boys and girls think or work. Instead they took account of their own observations, for instance with regard to the kinds of literature boys preferred.

49 Inspectors noted a number of features that helped to motivate boys in particular:

- lessons were well planned and organised, often with clear achievable aims and short-term targets
- lessons included a variety of activities including practical work, activity-based learning, the positive use of competition and good use of ICT

- lessons were made interesting and relevant by the use of 'real' situations
- teachers set high expectations and taught pupils to think for themselves and work independently, putting an emphasis on study skills
- teachers directed work strongly, but without stifling creativity and imagination
- questioning was quick-fire, lively and varied with the teacher ensuring that all pupils had a chance to participate
- pupils understood how current work built on earlier learning
- humour was used to good effect
- behaviour was well managed, discipline was fair and rewards and praise were used frequently
- teachers directed the seating arrangements
- writing frames, templates and discussion frames were used well
- teachers selected a fair proportion of texts, both fiction and non-fiction, that were likely to appeal to boys
- feedback focused on how work could be improved by specific steps.

In one school, the lessons were all well planned, teachers' subject knowledge was good and the pace was demanding. Good strategies included peer teaching, really searching questioning, careful use of special needs information to manage behaviour and learning difficulties, and a sense that subjects were intrinsically interesting and worth the effort. Homework was always set before the ends of lessons and teachers checked homework with great care. Diaries were well kept and were signed by parents, who often included useful comments. The pupils believed this was a good school, where teachers worked hard to support them so that they would do well.

50 Independent schools were asked to provide examples of those whom they regarded as good teachers in action. Other sources of evidence, including reports from the Independent Schools Inspectorate, suggest that the proportion of good teaching and good progress in lessons is not substantially different from that seen in maintained schools. However, because the predominantly good teaching was coupled with generally high levels of pupil motivation, learning was usually effective, though not invariably so. In one instance where the lesson content and teaching approach were rather dull, the behaviour and attitudes of the class were very much less positive than of any other, or of the same class when seen in two other lessons.

Whole-school focus on teaching and learning

51 Many schools sought to improve pupils' performance through a whole-school focus on teaching and learning. In-service training had helped teachers in many maintained schools to understand that pupils are motivated in different ways and can learn more effectively in some modes than others. Sometimes this led to research on raising achievement.

52 In response to the Key Stage 3 Strategy, some schools encouraged teachers to use three-part lessons and to make their learning objectives more explicit. Other schools had provided staff training on topics like formative assessment, responding to a variety of learning styles, or managing whole-class discussion. In a few cases, the training was supported by a programme of lesson observation, to help teachers embed new approaches into their daily practice. Many schools used a variety of strategies to improve teaching and learning, including pragmatic approaches such as changing syllabuses.

One school had placed a strong emphasis on staff development, closely linked to both the school development plan and departmental action plans. Training was provided on teaching and learning styles, use of ICT, behaviour management and the use of assessment, including analysis of national test data and a whole-school marking policy. The staff development was supported with a programme of lesson observations by senior staff.

53 Although there is nothing as clear-cut as a boys' learning style, many schools have found certain approaches to be particularly helpful. For example, although many boys are willing to contribute orally, they can also be helped to become more reflective in their replies. Their motivation can be enhanced by giving them greater access to computers for interactive learning or to help them improve their presentation for coursework. However, caution is necessary as popular conceptions that 'boy-friendly' texts and ICT help boys to produce better writing can be over-generalised.

One arts college had developed a practical approach to media studies, which included film-making. Pupils were given good opportunities to develop audio-visual literacy alongside their reading and writing. Boys were well motivated by the range of learning styles and enjoyed using ICT equipment, solving problems and working in small groups and on their own.

The facilities for using ICT and making moving images were good and were beginning to have an impact in other areas of the curriculum. For example, animation software was used in mathematics to develop spatial concepts relating to area and volume. Digital photography was used in Year 9 art to develop moving images using Wallace and Grommit-type plasticine models. In English, Key Stage 3 pupils made animated sequences to illustrate and interpret Macbeth and Key Stage 4 pupils made revision videos to support GCSE work on poetry.

54 Effective teachers were able to encourage independent thinking, problem-solving and creativity while providing a secure structure for learning and giving clear guidance on the time-scales and standards expected.

55 The use of ICT and new technologies was found to be beneficial in several maintained schools. Teachers in independent schools agreed that ICT could help motivate boys, but did not believe that its use had a significant effect on attainment levels. The examples of good practice observed by inspectors included:

- use of CDs and interactive equipment in modern foreign languages – for example, in one school where boys were doing better than girls, the boys made good use of ICT and enjoyed oral work

- making lessons available online, seen in one history department
- use of ICT to improve the presentation and the organisation of coursework for example, two schools found that the combined use of ICT and writing frames helped weaker pupils to improve their science coursework.

Strategies focusing on literacy

56 Several maintained schools highlighted action on literacy as being beneficial, particularly to boys. The performance of boys in different subjects was carefully considered, especially in relation to their performance in literacy. In schools that had strategies for the development of language skills in all subjects, teachers made effective use of writing frames to guide pupils' writing. Inspectors observed several strategies used effectively by teachers, including:

- the use of templates and discussion frames to help weaker pupils to interrogate text and draw conclusions in an English lesson
- a change to a non-coursework option in GCSE history and the introduction of writing frames helped boys to improve in one school
- the inclusion of some 'boy-friendly' English texts in both fiction and non-fiction
- giving proportionate attention to specifically male issues in literature – in one good lesson, pupils worked in mixed-gender groups, comparing *Billy Liar* and *Blood Brothers*, with each group looking at different themes
- using texts and topics that were of interest to boys and girls – for example, one English teacher encouraged pupils to think of different film genres, including science fiction, western, martial arts, action adventure, romance and horror, making good use of film posters
- the evaluation of teaching in response to an analysis of GCSE results. For example, one English teacher found that the top four in her class were boys. This led her to evaluate her teaching and reach a tentative conclusion that she teaches language in a 'scientific' way.

57 Gender was not perceived as a significant issue for the independent schools, either by staff or by pupils. Teachers were generally aware that for certain types of work, notably in English, they needed to adopt particular strategies that assist boys to perform in line with their potential, but there were no whole-school improvement strategies based on literacy.

Alternative curricula

58 Most of the schools offered a conventional range of GCSEs at Key Stage 4. In maintained schools, some option schemes allowed pupils to be disappplied from certain subjects, either to specialise in areas of strength or to enable more time to be spent on core subjects. For example, some able boys opted for separate sciences, while others gave up modern foreign languages. In some schools there was tension between the desire to avoid gender stereotyping of certain subjects and the likely benefit of allowing students to choose subjects freely.

59 At the time of the inspectors' visits, relatively few pupils were being offered alternatives to standard GCSE courses. Although some schools had introduced the possibility of work-related learning at college, this was often seen as an exceptional arrangement, reserved for the most disaffected. Although these courses did not always lead to accreditation, they had success in re-engaging into education some poor-attending and demotivated students, the majority of whom were boys.

In a community college, the achievement among older boys had been improved by offering a large number of vocational courses in Years 10 and 11, leading more boys to progress to further education when leaving at 16. A compulsory vocational course, offered in conjunction with a further education college, gave boys greater motivation to get involved in school work. Changes in teaching and learning methods and the support of learning mentors also contributed.

60 Since the inspectors' visits, the extent of alternative Key Stage 4 curricula has grown, helped by the new applied GCSE courses and the Increased Flexibility Programme (IFP), which funds vocational courses for 14 to 16 year olds in colleges and training organisations. Evidence from other Ofsted exercises suggests that more boys than girls are involved, and that most pupils are responding well to the greater vocational element and the more adult learning environment of colleges. Schools are reporting that, for some pupils, the increased motivation spreads from the college course back to school.

61 There are some possible concerns with alternative curricula. One is that they can be seen as a reward for bad behaviour, though the IFP is an attempt to bring vocational routes into the mainstream of Key Stage 4. Another concern is that the alternative curricula are mostly very gender-stereotyped, with girls taking hairdressing and childcare and boys taking engineering, construction and motor vehicle courses. It is therefore important to keep open a variety of routes to prevent pupils being funnelled too narrowly.

Subject-specific issues

62 Inspectors observed many lessons and talked to heads of department, paying particular attention to strategies that promoted boys' achievement. Their main focus was on the core subjects of English, mathematics and science, but other subjects were also observed. It will be noted that many of the strategies that worked for boys were generic therefore and likely to benefit most pupils in most subjects. Subject-related strategies are dealt with in more detail in annex A.

63 Inspectors observed many **English** lessons where the teachers had thought about teaching and learning. For example, they saw teachers who:

- encouraged boys to think and reflect on their first answers because although boys answered willingly their responses lacked depth
- encouraged pupils to plan and record their ideas using spider diagrams and charts
- used good examples from pupils' work to show boys and girls how to improve their writing
- made effective use of writing frames and other scaffolding to help weaker pupils to interrogate texts and draw conclusions

- explained and reiterated the lesson objectives and gave boys specific information on their strengths and weaknesses
- organised pupils into mixed groups of boys and girls and planned tasks so that pupils had to listen to each other and work together to gather information they needed.

The parallel Ofsted report *Yes he can: schools where boys write well* (see annex F) includes a more detailed study of factors affecting boys' achievement in English, particularly in writing.

64 In **mathematics**, where boys tend to perform as well as girls, there was less concern about boys' underachievement. Teachers in many schools were actively working on girls' achievement. The best teaching showed awareness of the different preferred learning styles of boys and girls. Lessons were planned to ensure a good level of contribution, commitment and effort from both boys and girls. Good lessons often involved a range of short and varied tasks, including practical work, structured investigations, games and puzzles and regular homework. Some teachers felt that boys respond particularly well to the national mathematics challenges. Success in these competitions provided an opportunity to celebrate academic achievement.

65 Inspectors observed some promising strategies in **science** departments. The science department at one technology college held a four-day 'immersion' programme at the beginning of Year 11 during which students completed their GCSE coursework. This helped reduce the pressure on other subjects. In another school, the science department paired able pupils with less able pupils of the opposite sex. They found that this worked well if the boy was the more able of the pair, but the less able boys did not respond so well.

66 In some schools, the use of National Curriculum level descriptors helped pupils to improve. This was reported in both science and modern foreign languages. In one school where boys were doing better than girls in modern foreign languages, boys made good use of CDs and interactive equipment and enjoyed oral work. Other schools found that writing frames and the use of ICT helped with the presentation and organisation of weaker pupils' coursework. This was evident in both science and history. One school found that boys' history results improved when they moved to a non-coursework option.

Tracking and supporting pupils' performance

67 All the schools that were visited gave priority to raising the attainment of all pupils. Many maintained schools also had strategies for improving the performance of particular groups of pupils, but such strategies were notably absent from the independent schools visited. The explanation generally given was that underachieving pupils were few in number and underperform for individual reasons, so support and remediation should be given on an individual basis. In general, however, all the independent schools had support and monitoring policies that were effective in enabling both boys and girls to fulfil their potential.

68 All but one of the maintained schools collected assessment data by gender and they were therefore aware of differences in the boys' and girls' results. However, not all schools undertook a thorough analysis to identify trends. Where information about pupils was examined rigorously it provided a basis for setting targets and tracking pupils' progress.

In a technology college, data comparing the college with other schools helped staff know whether standards were high enough. National data were used to indicate the progress pupils were making compared to those in other schools and Key Stage 2 results were

used to provide a baseline. Applying the data to individuals and groups enabled the college to track pupils' progress. Above all, the information helped the senior management team to change the climate of expectations.

69 Many schools make the pupil data widely available, making teachers aware of the range of potential in their classes so they can plan more engaging lessons and set individual targets for pupils. Subject departments use prior achievement data to organise pupils into sets. Where prior achievement in a set is better than for the corresponding group of the previous year, departments are sometimes persuaded to adjust the scheme of work to target a higher National Curriculum level, and this has the potential to improve results. However, the schools visited were not always successful in establishing a consistent approach to raising attainment. For example, target-setting for individual pupils, which was a common feature in most of the schools visited, sometimes did not focus sharply enough on academic performance.

One school reviewed the coursework demands on pupils, introducing shorter timescales so that each component was paced and supported. The emerging standard of pupils' work was compared with expected grades, and extra support was provided for students at risk of underachieving.

70 Many of the schools visited were just starting to explore the potential of value-added analysis. There remains scope for more sophisticated use of data. Closer tracking of individuals enables schools to detect, for example, some pupils 'in the middle' who are coasting.

71 None of the independent schools had sophisticated measures to analyse performance in terms of the value that might be added, although annual analysis of results and inter-subject comparisons were quite common. Only one example was found where statistical analysis was used successfully to improve performance in a subject department. Although schools varied in the thoroughness of their monitoring, the measures in place for testing and discussion of individual pupils were mainly rigorous. Where targets were in place, they tended to be specific to individual pupils in particular subject areas, rather than part of a wider whole-school approach to setting targets. Some staff were distinctly hostile to the idea of adopting formal target-setting based on statistically derived benchmarks.

72 Inspectors found that support for learning was a significant factor in improving pupils' attainment. Many maintained schools had taken positive steps to support learning. This support took many forms, including learning mentors, study centres, revision classes, residential activities, and homework and breakfast clubs. Many schools had initially deployed learning mentors to motivate disaffected pupils, but were extending the initiative more widely.

The learning mentors in one school had initially found pupils to be wary of their role. They found that boys in particular thought it 'uncool' to study, but often lacked confidence and had poor organisation and communication skills. The learning mentors began countering negative peer pressure, offering holistic one-to-one support and helping pupils to identify their barriers to learning. Pupils began to think more seriously about the future, and there were some striking individual improvements in attitude and attendance. As a result of their efforts, the learning mentors are now much in demand.

73 Many of the schools focused their attention and support on particular groups, such as pupils who were falling behind with their coursework, who were performing just below an examination grade boundary or who were showing signs of disaffection. Since there were often more boys in these groups, they tended to benefit proportionately more than girls. The detail of the intervention system was much less important than the closeness of the attention given to individual pupils. Among the schools visited:

- one school had focused on the development of positive marking strategies – rewarding effort, setting personal targets and rewarding the completion of homework;
- another had introduced a sharper emphasis on monitoring, with opportunities for boys to catch up and to benefit from a learning mentor;
- in an arts college, pupils received good support throughout the coursework process: intermediate targets and deadlines were specified and marking criteria were shared with the pupils so that they knew how their work would be judged;
- a technology college devoted the first four days of Year 11 to an extended science programme, ensuring that all pupils completed their science coursework.

74 Pupils said they valued individual attention above all, whether it was provided during lessons or by other means such as mentor sessions, lunchtime clinics, revision classes or help with homework. Underachieving pupils responded positively to the follow-up steps taken by their teachers and learning mentors: boys and girls regarded the individual interest that staff took in their progress as a positive feature that strengthened their motivation, not just a potential sanction. Overwhelmingly, boys felt that the teacher and the relationships were important. In interviews, many said that they appreciated the personal support given by teachers, often one-to-one or in small groups.

75 In independent schools, form or personal tutors were usually the main link between pupils, staff and parents. Both the schools and the pupils saw the role of the tutor as crucial. There were indications, stated explicitly by staff and pupils, that the mere knowledge of the close monitoring system, along with extrinsic factors such as parental reaction, encouraged boys to work harder. Many staff cited smaller classes in the independent sector as an important factor, enabling them to give pupils more individual attention. They generally agreed that monitoring and follow-up processes had greater potential benefit for boys than girls although most knew of industrious boys and wayward girls that were counter-examples to the general trend.

Single-sex teaching and gender-based organisation

76 Research on single-sex grouping in mixed schools does not provide a clear picture about who benefits most, or whether the advantages outweigh the disadvantages. (See the section on single-sex teaching in **Background**.)

77 A few of the mixed schools visited had tried single-sex classes, but with only marginal benefits. One school abandoned a trial in modern foreign languages, feeling it benefited the girls slightly and did not help the boys. Another school found some improvement in older boys' attitudes to work in science in Key Stage 4. In a school where boys did better than girls in nearly all subjects, an experiment with single-sex teaching groups was under way in science, but it was too early to see any results.

In one school, single-sex teaching groups were tried in Year 10 for English, religious education and personal, health and social education. The experiment was stopped for two reasons. The evidence that pupils were gaining more Cs in GCSE was not conclusive and one parent complained she did not want her son learning in a single-sex group. The school plans to try two single-sex groups again next year for high-ability Year 10 pupils. During the original trial period the headteacher and RE teacher observed each other's lessons. They found that in single-sex groups, girls did not speak out in discussions as readily as boys.

78 In some cases the effects were negative.

Another school experimented unsuccessfully with separate boys' and girls' groups for the least able pupils in mathematics in Year 9. The experiment was not repeated because boys' behaviour worsened and results declined.

79 Inspectors also found relatively few examples of gender-based seating of pupils in mixed schools. A few schools or departments had set out to address the underachievement of boys by seating boys and girls alternately and there was evidence that this helped attitudes to learning, especially among boys. In these schools, the boys often acknowledged that they worked better when they were not allowed to sit with male friends.

80 Comparing the performance of boys in single-sex and mixed schools is complicated because there are more single-sex schools in the independent sector and in areas with selective secondary schools. The results of an analysis of 2001 GCSE results in are given in annex B. The main findings of this analysis are:

- boys in single-sex maintained comprehensive schools achieved better GCSE results than their peers in mixed maintained comprehensive schools. This is true for all the measures analysed, including average GCSE points and the proportions of boys achieving 5+ A*–C grades, 5+ A*–G grades, 1+ A*–C grades and 1+ A*–G grades
- in comprehensive and grammar schools, boys' schools entered a higher proportion of boys for GCSEs than mixed schools. However, mixed secondary modern schools entered a higher proportion for the examination than boys' secondary modern schools
- GCSE achievement by girls in 2001 was also higher in single-sex schools than in mixed schools. The difference in average points (in 2001) between single-sex and mixed maintained comprehensive schools is less for boys than it is for girls
- when the 2001 results are analysed according to the number of pupils entitled to free school meals (table 2) the proportion of boys achieving 5+ A*–C grades is significantly higher in single-sex schools, except in schools with more than 50% of pupils entitled to free school meals. In five of the seven groups the proportion of boys achieving five or more GCSE grades A*–G is also significantly higher for single-sex schools
- when the schools are grouped according to prior attainment at Key Stage 3 (table 3), the proportion of boys achieving 5+ A*–C grades is significantly higher in single-sex schools in five of the six groups. The proportion gaining 5+ A*–G grades is also higher in five of the six groups.

81 These results should be interpreted with caution as fewer than 7% of boys in comprehensive schools are in single-sex schools. Also, a higher proportion of single-sex maintained schools are faith schools, whose distinctive ethos may account for some of the differences. In 2001, nearly 25% of single-sex schools were faith schools compared with fewer than 15% of mixed schools.

Conclusions

82 Boys continue to achieve less than girls in terms of GCSE and National Curriculum results. When boys enter secondary school they are already well behind girls in English, although they achieve marginally better than girls in mathematics. This has an effect on the majority of GCSE subjects. The narrowing of the 'gender gap' among younger pupils offers some encouragement, but few secondary schools can claim to have solved the problem of boys' underachievement.

83 However, inspection evidence and research both suggest a number of promising strategies for tackling the issue. Although an interpretation in terms of boys' achievement has been offered, in many respects the strategies are not gender-specific, and differ little from implementing what is commonly agreed to be best practice. Their messages may be summarised as follows:

- understanding the barriers to achievement in the school context and raising the expectations of staff, pupils and parents – this includes determining the factors leading to boys' underachievement;
- making sure the school has a strong ethos where pupils and staff show respect for each other and offer plenty of extra-curricular activities, thereby making the school a place where boys feel they belong;
- implementing behaviour and discipline policies firmly but equitably, with good pastoral support, so the school is a place where boys feel comfortable with learning;
- using staff development to raise awareness of pupils' different learning styles and helping boys to organise their independent work by giving more frequent, shorter deadlines;
- improving the quality of teaching and classroom management, thus helping teachers to gain the respect and attention of boys;
- ensuring that assessment is followed by feedback that tells pupils what they have to do to improve standards, showing boys, in particular, specific ways to improve their work;
- monitoring pupils' progress against benchmarks and targets, and intervening early so boys' problems are addressed before they cause demotivation;
- increasing the range and extent of learning support available for pupils and tackling low self-esteem among boys by helping them with organisation;
- improving the standards of literacy, particularly among low-attainers;
- considering the match between pupils' interests and aspirations, and offering courses that appeal to different types of learners, so catering for those boys who prefer practical to written work;
- encouraging teachers to organise pupil seating arrangements in ways that improve learning, recognising that some boys, particularly, find it difficult to concentrate when sitting with their friends.

Annexes

Annex A. Subject-related strategies

Inspectors observed many lessons and talked to heads of department, paying particular attention to strategies that promoted boys' achievement. Their main focus was on the core subjects of English, mathematics and science, but other subjects were sometimes observed. English lessons were also observed for the parallel Ofsted report on boys' writing *Yes he can: schools where boys write well* (see annex F). Many of the strategies that helped improve boys' achievement were generic and are therefore covered in the main body of this report. Useful subject-specific strategies included the following.

English

In good **English** lessons teachers:

- encouraged boys whose answers lacked depth because of their keenness to give instant replies, by encouraging them to take time to think and reflect
- used oral work well as a prelude to most writing tasks, and used good examples from pupils' work to illustrate how to improve their writing
- used their thorough knowledge of texts to probe and question pupils' responses
- made effective use of writing frames and other scaffolding to help weaker pupils to interrogate text and draw conclusions, balancing this with the challenge to write independently, therefore removing support when it is no longer needed
- gave boys specific information on their strengths and weaknesses through conscientious, detailed marking and feedback that recognises and values particular qualities in boys' writing
- explained and reiterated the lesson objectives and explicitly taught and reviewed vocabulary
- made good use of texts and topics that were of interest to boys and girls – for example, one lesson encouraged pupils to think of different film genres, including science-fiction, western, martial arts, action adventure, romance and horror. Displays of film posters included materials that interested boys and girls
- often organised pupils into mixed groups of boys and girls, and pupils had to listen to each other and work together to gather information they needed
- ensured that issues of interest to boys as well as girls were included in poetry and literature
- encouraged pupils to plan and record their ideas using a variety of diagrams and charts and maintained a balance between writing used to aid thinking or study and the production of polished extended text.

The Ofsted report *Yes he can: schools where boys write well* identifies several factors that characterise the work of schools in which boys write well. For example:

- value is placed on diversity of style and approach in written work

- teachers are knowledgeable and enthusiastic about language and are able to link oral work, reading and writing skilfully and explicitly
- a good balance is maintained between support and independence
- pupils are often given choice as to the content of their writing
- efforts are made to make writing tasks purposeful
- writing tasks are often tackled in stages, with feedback or review at each stage
- pupils write frequently and at length developing stamina as writers, but they seldom rewrite long pieces unless for 'publication'.

Mathematics

In effective **mathematics** lessons:

- in many schools teachers are actively working on girls' achievement. The best teaching shows awareness that some pupils learn more effectively from teaching styles not favoured by the teacher, and plans to ensure a good level of contribution, commitment and effort from both sexes
- teachers with good subject knowledge used probing questioning and were able to get pupils to explain their reasoning. Some made particular efforts to show the relevance of mathematics to real life
- good lessons were well structured, with the teacher making the learning objectives clear. Teachers often, but not universally, followed the style promoted by the Key Stage 3 Strategy
- good lessons often involved a range of short and varied tasks, including practical work, structured investigations, games and puzzles and regular homework
- some departments achieved good results through a modular approach to planning. In one City Technology College, the thorough and well-organised scheme of work is supported by unit guides for pupils that tell the pupils how the work will be developed, what they have to learn and do, and so help them to know where they stand
- boys respond particularly well to the national mathematics challenges, which offer non-standard, multiple-choice questions that encourage deeper thought and risk-taking. These also provide an opportunity to celebrate achievement.

Science

Inspectors observed some promising strategies in **science** departments:

- in some schools, the use of National Curriculum level descriptors helped pupils to improve. Other schools found that ICT helped with presentation and writing frames helped the organisation of weaker pupils' coursework
- one school found that boys in particular responded well to the use of competitions.

- the science department at one technology college held a four-day 'immersion' programme at the beginning of Year 11 during which students completed their GCSE coursework. This helped reduce the pressure on other subjects
- the science department at one school undertook research relating to raising boys' achievement. They focused particularly on boys with low Key Stage 3 levels, but above average non-verbal reasoning scores. They found that boys whose English was weak performed well on the modular science tests used in Key Stage 4, especially where multiple choice questions were used. They also noted that the boys performed better when they respected and 'rated' the teacher, and that needed to feel that they were achieving, but they often preferred praise to be given privately
- in an arts college, pupils receive good support throughout the coursework process with intermediate targets and deadlines being specified. In science, criteria are shared with the pupils so that they know exactly how their work will be judged. Writing frames are commonly used to provide an initial structure as well as to support lower-attaining pupils.

Other subjects

Although they mainly observed lessons in the core subjects, inspectors occasionally visited other subjects. They found that:

- in one school where boys were doing better than girls in modern foreign languages boys made good use of ICT (CDs and interactive equipment) and enjoyed oral work. They also found that the use of National Curriculum level descriptors helped pupils improve in modern foreign languages
- in a technology college, templates and the use of ICT helped boys to improve the tidiness and organisation of their coursework. The same college had made history lessons available online
- boys improved in GCSE history in one school after the department introduced writing frames and moved to a non-coursework option.

Annex B. Data on single-sex and mixed schools

Table I. GCSE/GNVQ results in maintained secondary schools 2001

Type of school		Number of 15* year old pupils	Percentage of 15* year olds who attained:				Average GCSE points
			5+ A*-C grades	5+ A*-G grades	1+ A*-C grades	1+ A*-G grades	
Boys							
in Boys' Schools	Comp	16,231	44.2	89.2	71.8	95.4	36.7
	Selective	7,594	96.9	99.2	99.3	99.5	62.8
	Modern	1,943	34.6	86.7	65.4	94.8	31.7
in Mixed Schools	Comp	237,716	41.4	89.1	68.1	95.3	35.5
	Selective	2,636	95.6	98.5	98.8	99.1	58.5
	Modern	10,343	30.1	88.0	62.1	95.3	30.5
in Secondary Schools	Comp	253,952	41.6	89.1	68.4	95.3	35.6
	Selective	10,231	96.5	99.0	99.2	99.4	61.7
	Modern	12,286	30.9	87.8	62.6	95.2	30.7
Total		276,469	43.1	89.4	69.2	95.5	36.3
Girls							
in Girls' Schools	Comp	23,653	56.3	93.2	81.8	97.3	43.1
	Selective	7,999	98.3	99.4	99.6	99.7	64.2
	Modern	3,074	50.5	93.5	79.0	96.7	39.0
in Mixed Schools	Comp	223,497	51.9	91.9	78.0	96.3	40.6
	Selective	2,757	97.2	99.1	99.5	99.6	62.0
	Modern	9,170	39.7	90.6	72.9	95.5	34.9
in Secondary Schools	Comp	247,153	52.3	92.0	78.3	96.4	40.9
	Selective	10,762	98.0	99.2	99.5	99.6	63.6
	Modern	12,244	42.4	91.3	74.4	95.8	36.0
Total		270,159	53.7	92.3	79.0	96.5	41.5

Note: the table omits the small numbers of boys in girls' schools and girls in boys' schools.

In 2001, boys in single-sex maintained comprehensive schools attained better GCSE results than their peers in mixed maintained comprehensive schools. This is true for all the measures shown, including average GCSE points and the proportions of boys achieving 5+ A*-C grades, 5+ A*-G grades, 1+ A*-C grades and 1+ A*-G grades. The position is similarly emphatic in maintained selective schools, but less clear-cut in secondary modern schools. Maintained boys' comprehensive and grammar (but not modern) schools also entered a higher proportion of pupils for GCSEs.

These results should be interpreted with caution, however, as less than 7% of boys in comprehensive schools are in single-sex schools. Also a higher proportion of single-sex maintained schools are faith schools, whose distinctive ethos may account for some of the differences. There are also more single-sex schools in the independent sector and in areas with selective secondary schools. It should be noted that GCSE attainment by girls in 2001 was also higher in single-sex schools than in mixed schools (table I). The difference in average points (in 2001) between single-sex and mixed maintained comprehensive schools is less for boys than it is for girls.

Table 2. Comparison of 2000/02 GCSE average points attained by boys in all-boy and mixed maintained comprehensive schools, controlled for free school meals entitlement

Free school meals group 1 (up to 5% inclusive)

	2000			2001			2002		
	Boys'	Mixed	Diff	Boys'	Mixed	Diff	Boys'	Mixed	Diff
%5 A*-C	72.3	61.2	11.1**	75.2	60.3	14.9**	75.1	62.6	12.5**
%5 A*-G	97.0	95.4	1.6**	98.2	95.5	2.7**	96.6	95.5	1.1**
%1 A*-G	98.3	97.8	0.5**	99.0	98.0	1.0**	98.1	98.1	-0.0

Free school meals group 2 (>5%-9%)

	2000			2001			2002		
	Boys'	Mixed	Diff	Boys'	Mixed	Diff	Boys'	Mixed	Diff
%5 A*-C	51.6	51.6	0.0	60.7	52.2	8.5**	61.0	51.8	9.2**
%5 A*-G	93.7	93.8	-0.1	94.8	93.6	1.2**	94.4	93.1	1.3**
%1 A*-G	97.0	97.1	-0.1	97.7	97.3	0.4**	97.7	97.1	0.6**

Free school meals group 3 (>9%-13%)

	2000			2001			2002		
	Boys'	Mixed	Diff	Boys'	Mixed	Diff	Boys'	Mixed	Diff
%5 A*-C	50.5	44.5	6.0**	54.5	45.1	9.4**	50.9	44.8	6.2**
%5 A*-G	93.5	91.2	2.3**	93.8	91.4	2.4**	92.4	91.1	1.3**
%1 A*-G	96.9	95.9	1.0**	97.4	96.4	1.0**	96.7	96.3	0.4**

Free school meals group 4 (>13%-21%)

	2000			2001			2002		
	Boys'	Mixed	Diff	Boys'	Mixed	Diff	Boys'	Mixed	Diff
%5 A*-C	41.1	36.2	4.9**	39.8	37.6	2.2**	43.1	36.2	6.9**
%5 A*-G	86.7	88.2	-1.5	87.3	88.7	-1.4	87.7	87.9	-0.2
%1 A*-G	93.6	94.3	-0.7	94.5	95.2	-0.7	94.6	95.1	-0.5

Free school meals group 5 (>21%-35%)

	2000			2001			2002		
	Boys'	Mixed	Diff	Boys'	Mixed	Diff	Boys'	Mixed	Diff
%5 A*-C	34.9	28.5	6.5	36.4	28.7	7.7**	37.3	29.0	8.3**
%5 A*-G	87.2	84.5	2.7**	88.8	84.7	4.1**	87.7	83.7	4.1**
%1 A*-G	94.1	92.7	1.4**	95.3	92.9	2.4**	94.4	92.9	1.5**

Free school meals group 6 (>35%-50%)

	2000			2001			2002		
	Boys'	Mixed	Diff	Boys'	Mixed	Diff	Boys'	Mixed	Diff
%5 A*-C	27.7	20.9	6.8**	24.9	23.6	1.3**	29.2	23.9	5.3**
%5 A*-G	83.8	78.9	4.9**	81.9	80.7	1.2**	78.9	79.4	-0.5**
%1 A*-G	92.7	90.2	2.5**	93.0	91.7	1.3**	94.0	90.9	3.1**

Free school meals group 7 (>50+%)

	2000			2001			2002		
	Boys'	Mixed	Diff	Boys'	Mixed	Diff	Boys'	Mixed	Diff
%5 A*-C	22.6	17.8	4.8**	22.5	19.3	3.2**	21.9	23.3	-1.4**
%5 A*-G	76.1	75.9	0.2**	77.8	76.6	1.2**	82.5	78.5	4.0**
%1 A*-G	89.6	89.8	-0.2	90.0	89.9	0.1**	95.7	91.1	4.6**

Excluding grammar and secondary modern schools.

** Indicates a significant difference between boys' results in boys' schools and boys' results in mixed schools (a=0.01, figures in table have been rounded)

When the 2000/02 GCSE results are analysed according to the number of pupils entitled to free school meals (see table 2), the boys' school results are significantly better in most categories in most years. The most notable exceptions are that boys in mixed schools do

better at 5+ A*–G and 1+ A*–G (but not significantly so) in schools where 13%–21% are entitled to free school meals and that, in schools where more than 50% are entitled to free school meals, boys in mixed schools are now more likely to achieve 5 or more A*–C grades than those in boys' schools.

Table 3. Comparison of 2000/02 GCSE average points attained by boys in all-boy and mixed maintained comprehensive schools, controlled for prior attainment at Key Stage 3

Distribution by Key Stage 3 average points for all core subjects* two years previously

Up to but not including 27

	2000			2001			2002		
	Boys'	Mixed	Diff	Boys'	Mixed	Diff	Boys'	Mixed	Diff
%5 A*–C	18.5	13.6	4.9**	21.1	15.1	6.0**	21.7	15.6	6.1**
%5 A*–G	70.9	70.0	0.9**	78.8	71.1	7.7**	80.3	71.4	8.9**
%1 A*–G	88.2	87.0	1.2**	95.4	87.3	8.1**	95.2	88.3	6.9**

At least 27 but less than 30

	2000			2001			2002		
	Boys'	Mixed	Diff	Boys'	Mixed	Diff	Boys'	Mixed	Diff
%5 A*–C	22.6	20.5	2.1**	23.4	22.8	0.6**	26.3	22.6	3.7**
%5 A*–G	79.6	80.3	-0.7	79.8	81.6	-1.8	81.1	79.8	1.3**
%1 A*–G	90.3	91.1	-0.8	90.5	91.7	-1.2	93.4	91.4	1.9**

At least 30 but less than 33

	2000			2001			2002		
	Boys'	Mixed	Diff	Boys'	Mixed	Diff	Boys'	Mixed	Diff
%5 A*–C	35.4	35.3	0.1**	37.5	37.6	-0.1	38.0	35.7	2.3**
%5 A*–G	88.2	88.3	-0.1**	89.2	89.2	0.0	87.6	87.9	-0.2
%1 A*–G	94.6	94.5	0.2**	95.5	95.4	0.1**	94.7	94.9	-0.2

At least 33 but less than 36

	2000			2001			2002		
	Boys'	Mixed	Diff	Boys'	Mixed	Diff	Boys'	Mixed	Diff
%5 A*–C	54.6	52.5	2.1**	59.6	54.7	4.9**	58.6	53.1	5.5**
%5 A*–G	92.9	93.7	-0.8	95.1	94.2	0.9**	93.8	93.5	0.4**
%1 A*–G	96.7	97.0	-0.2	98.0	97.5	0.5**	97.3	97.2	0.1**

At least 36 but less than 39

	2000			2001			2002		
	Boys'	Mixed	Diff	Boys'	Mixed	Diff	Boys'	Mixed	Diff
%5 A*–C	69.8	68.0	1.8**	77.3	69.7	7.6**	72.8	68.7	4.1**
%5 A*–G	97.4	96.8	0.6**	97.8	96.8	1.0**	97.2	96.9	0.3
%1 A*–G	98.4	98.3	0.1**	98.6	98.4	0.2**	98.1	98.5	-0.4

39 or more

	2000			2001			2002		
	Boys'	Mixed	Diff	Boys'	Mixed	Diff	Boys'	Mixed	Diff
%5 A*–C	94.0	89.9	4.1**	96.9	92.7	4.2**	92.8	88.5	4.3**
%5 A*–G	98.9	97.3	1.6**	99.0	98.7	0.3**	98.3	99.0	-0.7**
%1 A*–G	100.0	99.3	0.7**	99.0	98.7	0.3**	99.4	99.8	-0.4

* The core subjects are English, mathematics and science

** Indicates a significant difference between boys' results in boys' schools and boys' results in mixed schools (α=0.01, figure shown are rounded)

When the schools are grouped according to prior attainment at Key Stage 3 (see table 3), the boys' school results are significantly better in most categories in most years. The differences are least convincing in the schools in the groups where pupils had average Key Stage 3 points scores between 27 and 33.

Annex C. National Curriculum test results 1998/2002

Table 4. Percentage of pupils achieving level 2 or better in Key Stage 1

	Reading			Writing			Mathematics		
	Boys	Girls	Diff	Boys	Girls	Diff	Boys	Girls	Diff
1998	75.8	84.9	-9.1	76.7	86.2	-9.5	83.4	86.3	-2.9
1999	78.0	86.5	-8.4	78.8	87.9	-9.0	86.0	88.4	-2.5
2000	80.0	87.8	-7.8	80.8	89.2	-8.4	89.2	91.3	-2.1
2001	80.7	88.2	-7.5	82.2	90.2	-7.9	90.3	92.1	-1.8
2002*	81.0	88.2	-7.2	82.5	90.4	-7.9	89.9	91.8	-1.9

Table 5. Percentage of pupils achieving level 4 or better in Key Stage 2

	English			Mathematics			Science		
	Boys	Girls	Diff	Boys	Girls	Diff	Boys	Girls	Diff
1998	57.0	73.0	-16.0	59.4	57.5	1.9	70.2	68.5	1.8
1999	65.3	75.8	-10.5	69.3	68.6	0.7	79.2	78.4	0.8
2000	70.7	79.4	-8.7	72.4	71.1	1.3	84.8	85.6	-0.8
2001	70.4	80.2	-9.9	71.6	70.5	1.1	87.8	88.0	-0.2
2002*	70.5	79.2	-8.6	73.8	73.7	0.1	87.0	86.8	0.2

Table 6. Percentage of pupils achieving level 5 or better in Key Stage 3

	English			Mathematics			Science		
	Boys	Girls	Diff	Boys	Girls	Diff	Boys	Girls	Diff
1998	55.0	72.8	-17.5	59.1	58.0	1.1	56.7	53.3	3.4
1999	54.0	71.8	-17.8	61.9	61.3	0.6	54.4	53.7	0.7
2000	54.6	71.9	-17.3	64.5	64.4	0.0	60.6	57.0	3.6
2001	56.7	72.9	-16.2	65.5	66.6	-1.1	66.1	64.9	1.2
2002*	58.0	75.0	-17.0	67.0	68.0	-1.0	66.0	67.0	-1.0

Table 7. Percentage of pupils achieving level 6 or better in Key Stage 3

	English			Mathematics			Science		
	Boys	Girls	Diff	Boys	Girls	Diff	Boys	Girls	Diff
1998	24.9	40.9	-15.9	35.2	32.4	2.8	27.0	23.3	3.6
1999	18.8	32.7	-13.9	36.8	35.0	1.8	22.1	21.8	0.3
2000	19.4	33.5	-14.1	40.1	38.7	1.4	28.9	26.4	2.5
2001	24.0	37.7	-13.7	41.0	41.4	-0.4	33.1	31.4	1.8
2002*	25.0	40.0	-15.0	45.0	45.0	0.0	33.0	32.0	1.0

Commentary

By the end of Key Stage 1, a higher proportion of girls than boys are achieving level 2 in reading and writing and mathematics (see table 4). These differences remain significant in all categories when results are analysed by free-school-meal bands. The differences between boys' and girls' results do not appear to be affected by the proportion of boys in the school, except in a few extreme cases where 80% or more are of one sex. The most interesting feature is that the gender gap appears to be narrowing by this measure, but not by the alternative measure of average points scores (see figures 1 to 3). In reading and writing, the gap between girls and boys has remained fairly steady, but in mathematics boys are now attaining slightly higher average points scores than girls.

By the end of Key Stage 2, boys remain well behind in English, both in terms of the proportion reaching level 4 and by average points scores (see table 5 and figure 4). However, they have a clear advantage in mathematics (see table 5 and figure 5), although not all the differences in mathematics are statistically significant. Boys and girls attain roughly the same results in science. Apart from the change between 1998 and 1999, the trend for the gender gap in English to narrow is less pronounced in the Key Stage 2 results than in Key Stage 1. It shows up mainly in the proportions reaching level 4 (see table 5), rather than in average points scores (see figure 6), but nonetheless offers some encouragement. Overall, when average points are combined for all core subjects (see figure 7), girls score slightly higher by around 0.5 points.

By the end of Key Stage 3, boys remain well behind in English, whether measured by proportions achieving levels 5 and 6 (see tables 6 and 7) or by average points scores (see figure 8). In mathematics and science, the proportions of boys and girls achieving levels 5 and 6 are similar, with the boys slightly ahead in most years (see tables 6 and 7). A similar finding applies to average points in these subjects (see figures 9 and 10).

When the 2002 results are compared with the Key Stage 2 results for the same cohort (1999), the boys' results have declined in relation to girls' results in English, mathematics and science. Among girls, the proportions achieving level 4+ in Key Stage 2 English in 1999 and level 5+ in Key Stage 3 English in 2002 are almost the same. For boys, the proportion achieving level 5+ in Key Stage 3 English in 2002 is significantly lower than the proportion that attained level 4+ in Key Stage 2 English in 1999. In terms of average points scores, the gap in English has grown from 1.4 at Key Stage 2 to 2.9 at Key Stage 3, while boys' advantage over girls in mathematics and science has declined slightly.

In recent years, boys' performance relative to girls in English is worse at level 6 and above than it is at level 5 and above (see table 7). Among boys who attain level 5+, less than half get the higher levels of 6+, whereas the majority of girls at level 5+ have attained the higher levels. Boys' attainment in mathematics and science at level 6+ is slightly better than girls.

Figure 1. Reading Key Stage 1 average point score

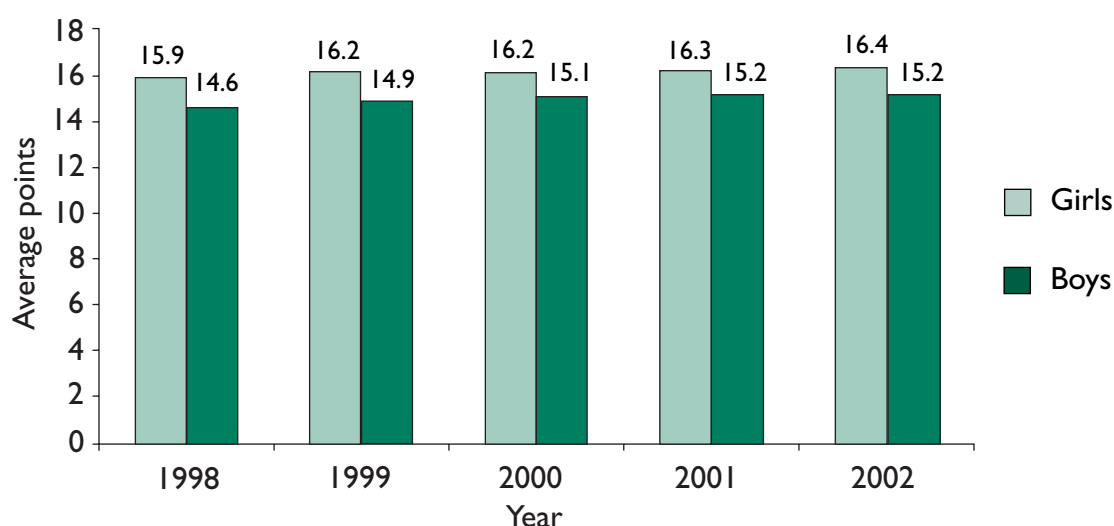


Figure 2. Writing Key Stage I average point score

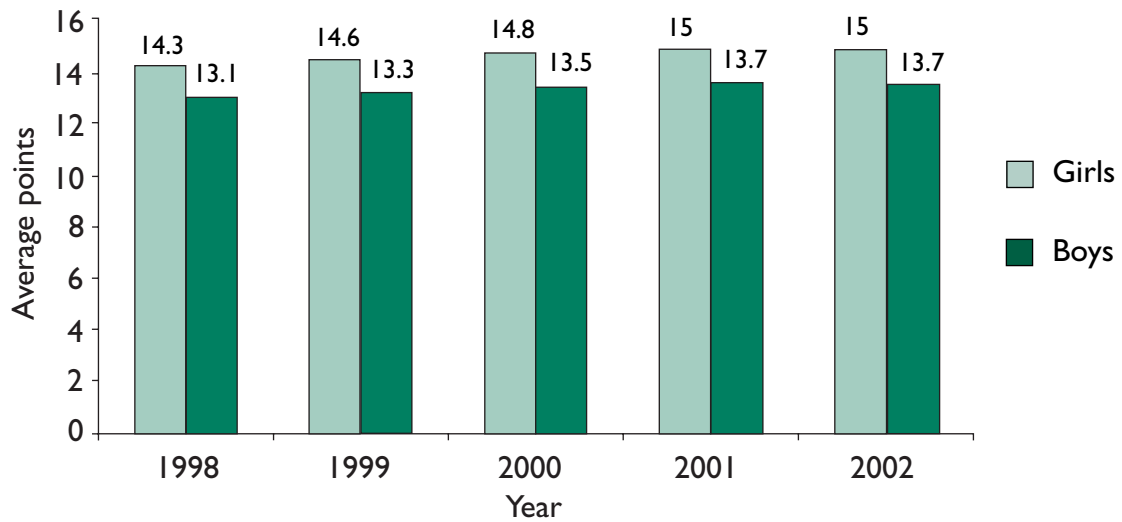


Figure 3. Maths Key Stage I average point score

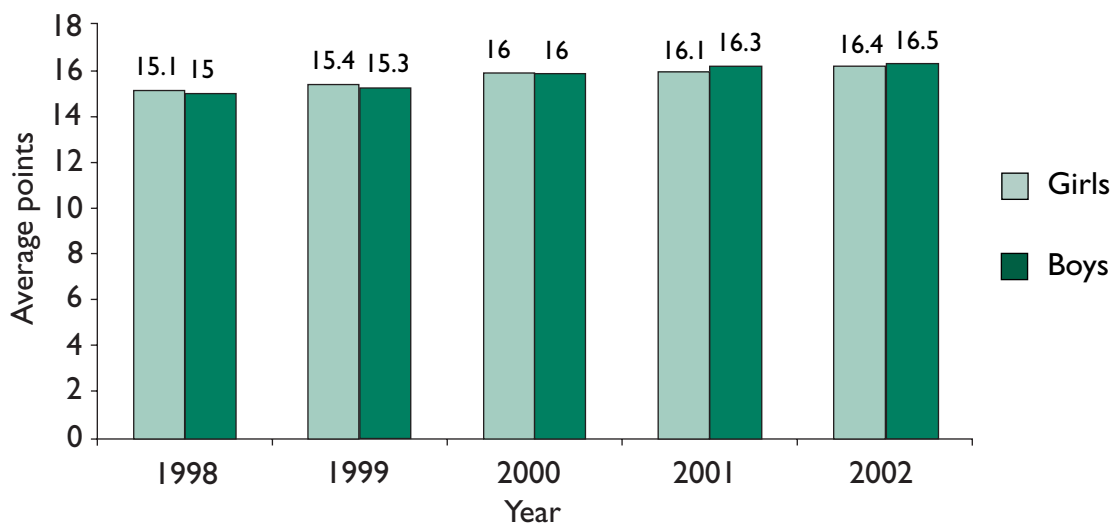


Figure 4. English Key Stage 2 average point score

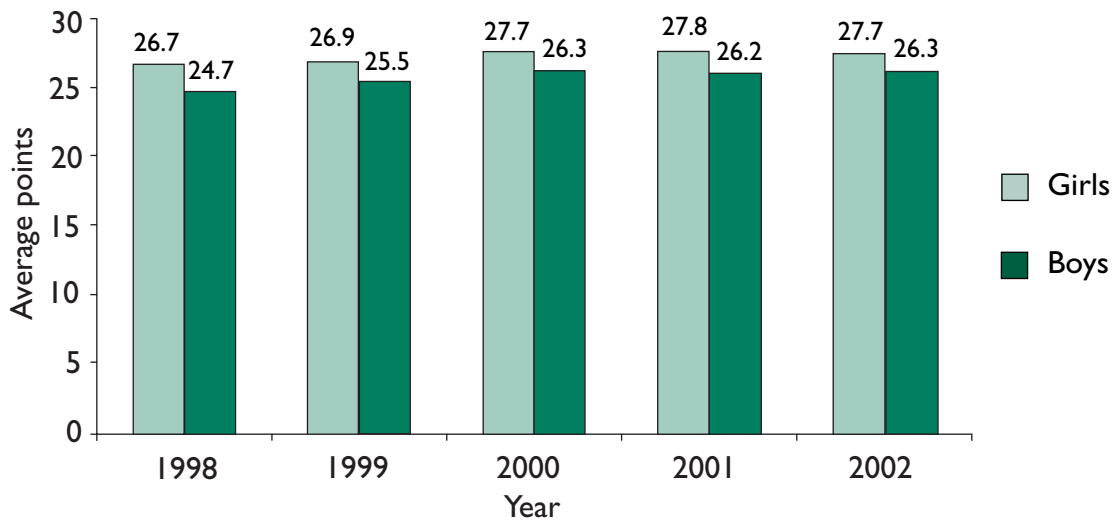


Figure 5. Maths Key Stage 2 average point score

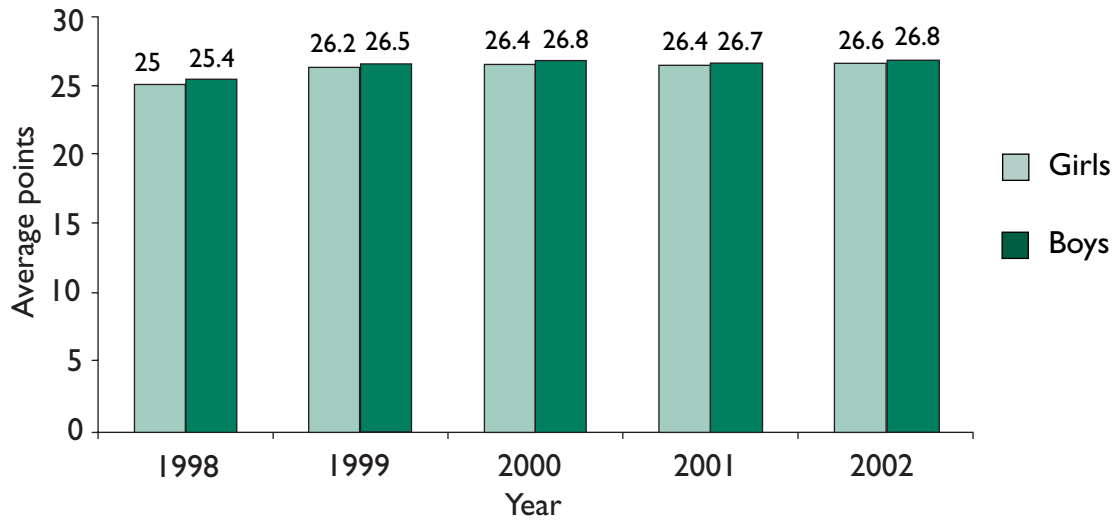


Figure 6. Science Key Stage 2 average point score

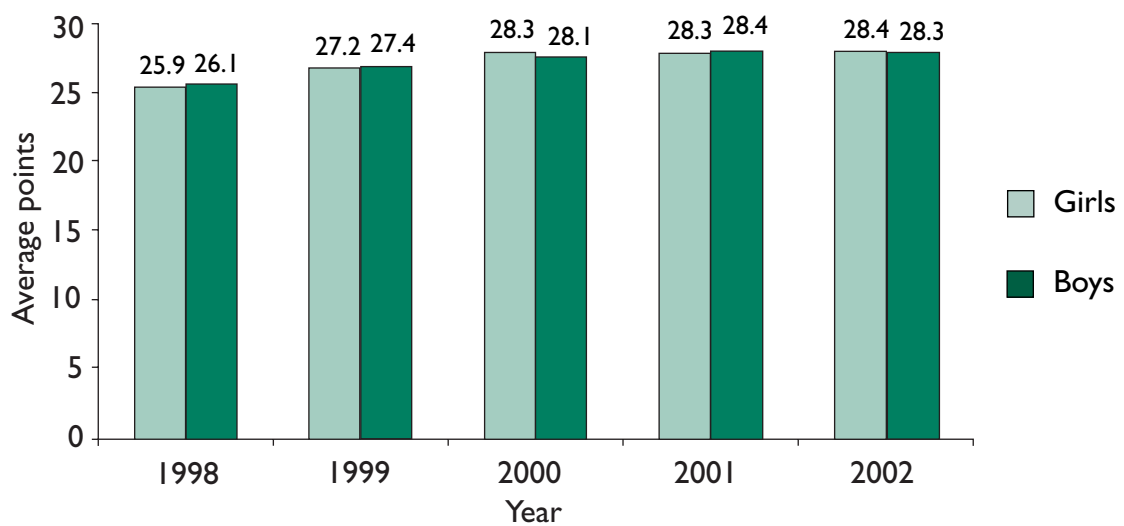


Figure 7. All core subjects Key Stage 2 average point score

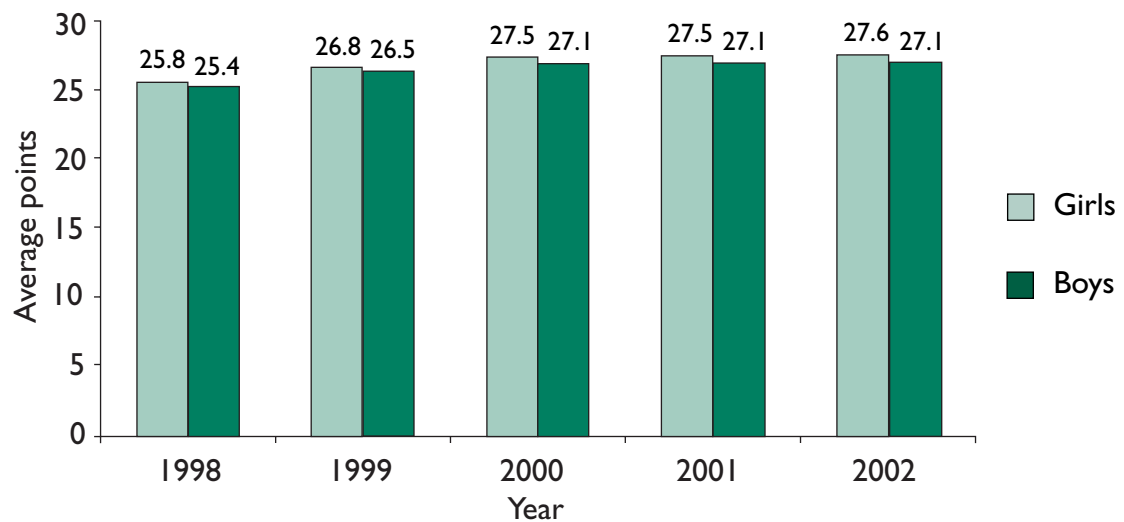


Figure 8. English Key Stage 3 average point score

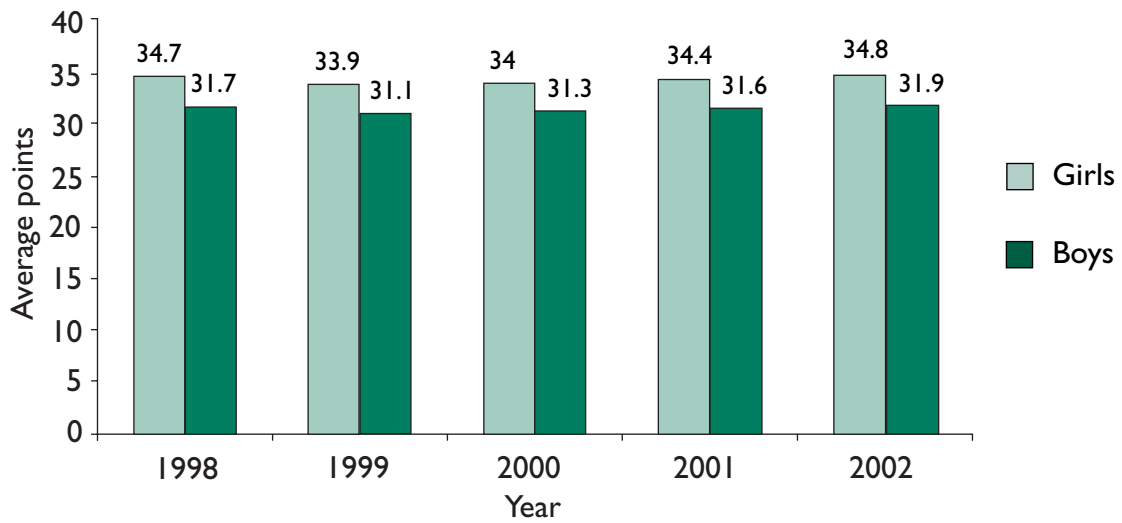


Figure 9. Maths Key Stage 3 average point score

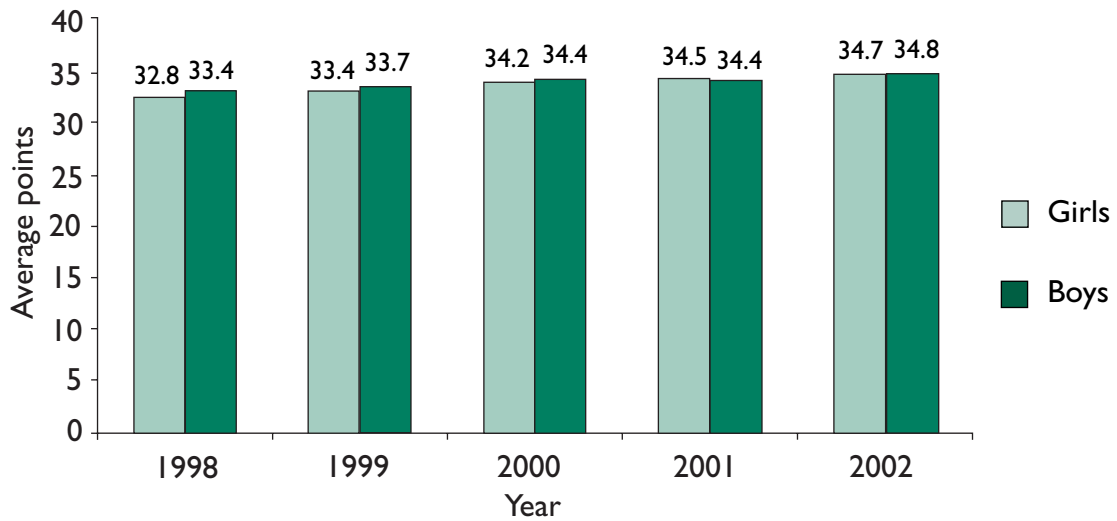


Figure 10. Science Key Stage 3 average point score

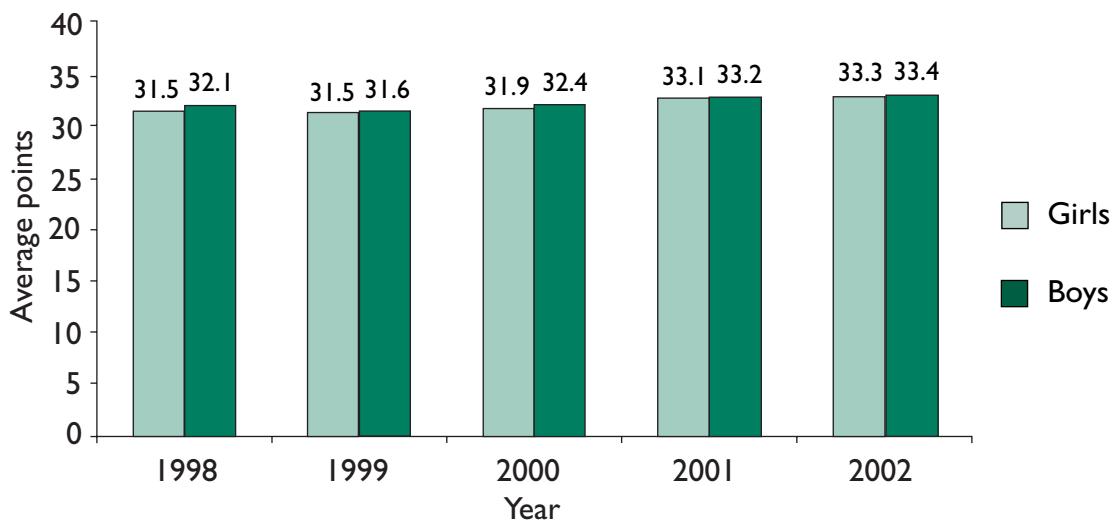
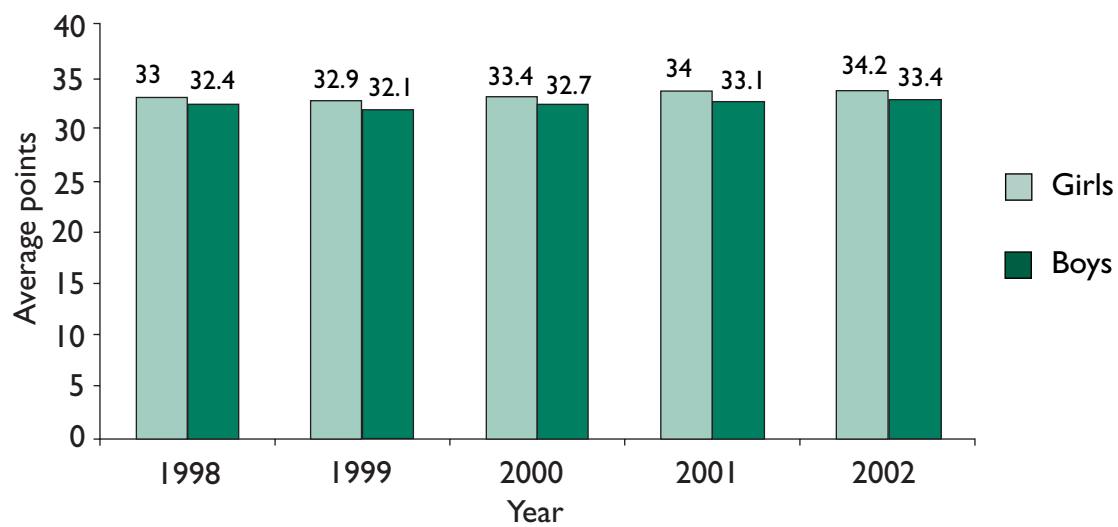


Figure 11. All core subjects Key Stage 3 average point score

Annex D. Differences between boys' and girls' GCSE results

The tables give an analysis of the results for 2000 and 2001.

Table 8. In these subjects the percentage of girls achieving A*–C exceeded that of boys by:

Subjects where girls do better	Difference	Subjects where boys do as well as girls	Difference
Art and Design	21	Combined Science – Single Award	5
Design and Technology	17	Business Studies	5
French	17	Physical Education/Sports Studies	3
Communication Studies	17	Statistics	3
English/English Language	16	Combined Science – Double Award	3
Religious Studies/Education	16	Chemistry	3
Spanish	16	Mathematics	1
Home Economics	16	Biology	1
English Literature	16	Physics*	1
Drama	15		-4
German	15		

* Indicates that boys achieved more A*–C grades than girls in the subject

Overall, the 2000 and 2001 GCSE results show girls doing better than boys in nearly all subjects. The only major subject where boys get a higher proportion of A*–C grades is physics.

Table 9. In these subjects the average points achieved by girls exceeded that of boys by:

Subjects where girls do better	Ave pts difference	Subjects where boys do as well as girls	Ave pts difference
Art and Design	0.91	Combined Science – Single Award	0.24
Religious Studies/Education	0.82	Business Studies	0.22
Spanish	0.72	Biology	0.15
Home Economics	0.72	Physical Education/Sports Studies	0.14
Design and Technology	0.71	Chemistry	0.13
Communication Studies	0.70	Combined Science – Double Award	0.12
Other Languages	0.70	Statistics	0.11
French	0.70	Mathematics	0.05
German	0.62	Physics*	-0.15
English/English Language	0.61		
English Literature	0.61		
Drama	0.61		
Humanities	0.60		
Sociology	0.59		

* Indicates that boys averaged higher points in the subject than girls

The only subject where the boys' average point score is higher than the girls' is again physics. Among subjects where the girls' average point score is higher, the smallest difference is in mathematical and scientific subjects, business studies and physical education. The list of subjects where boys are furthest behind is dominated by English, modern foreign languages, religious education and creative or design-based subjects. In subjects where the gap is greatest, boys would still be behind on average points if half of them improved by one grade.

Table 10. Key Stage 3 test results 1998/99

1998	English		Mathematics		Science	
	Boys	Girls	Boys	Girls	Boys	Girls
% level 5+	56	73	59	59	57	54
% level 6+	27	42	36	34	28	25

1999	English		Mathematics		Science	
	Boys	Girls	Boys	Girls	Boys	Girls
% level 5+	54	72	62	62	55	55
% level 6+	20	34	38	37	23	24

The pattern of attainment is consistent with the Key Stage 3 results for the same cohort, which show that standards in mathematics and science were broadly similar for boys and girls, but that boys achieved significantly lower standards in English. Therefore any target-setting that is based on expected progress from Key Stage 3 results is likely to have the effect of setting lower GCSE targets for boys than for girls.

Table 11. In these subjects the percentage of girls achieving A*–A and exceeded that of boys by:

Subjects where girls do better	Difference	Subjects where boys do as well as girls	Difference
Art and Design	14	Vocational Studies	3
Other Languages	11	Information Technology	3
Religious Studies/Education	10	Combined Science – Double Award	2
Drama	9	Business Studies	2
Communication Studies	9	Combined Science – Single Award	1
Spanish	8	Statistics	0
Design and Technology	8	Mathematics	0
German	8	Physics*	-3
French	7		
English Literature	7		
Dance	7		
English/English Language	7		

* Indicates that boys achieved more A*–A grades in the subject than girls

When the highest grades are considered, girls hold a commanding lead in most subjects. Language-based and creative subjects again dominate the list of subjects where the gap is greatest. Boys gain proportionally more A*–A grades than girls in physics and mathematics and are not far behind in several other mathematical, scientific and business subjects, including information technology.

Table 12. In these subjects the percentage of girls achieving A*–G and exceeded that of boys by:

Subjects where girls do best	Difference	Subjects where boys do best	Difference
Home Economics	4.0	Geography	0.6
Religious Studies/Education	3.3	English/English Language	0.5
Humanities	2.4	Mathematics	0.3
Vocational Studies	2.2	Combined Science – Double Award	0.3
Music	2.0	Chemistry	0.2
Design & Technology	2.0	Physical Education/Sports Studies*	-0.1
		Physics*	-0.1
		Biology*	-0.2

* Indicates that boys did better than girls

The picture is less clear when A*–G rates are considered. Boys do better than girls in biology, physics and physical education, and are not far behind in chemistry, mathematics, and combined science. However, the separate sciences are mainly the province of able students, so their presence in this list is of less significance. More interesting is the relatively small gap between boys and girls in English.

Table 13. In these subjects the girls or boys made up more than 55% of the entry

Subjects where more girls entered	% of entry	Subjects where more boys entered	% of entry
Dance	96%	Business Studies	55%
Home Economics	94%	Geography	56%
Sociology	74%	Biology	58%
Drama	62%	Chemistry	59%
Religious Studies/Education	59%	Physics	59%
Spanish	58%	Information Technology	60%
Vocational Studies	58%	Physical Education/Sports Studies	68%
Music	57%		
Communication Studies	57%		

Note: only subjects with more than 5,000 entries a year were considered for this table.

A few subjects, most notably dance, home economics, sociology and physical education, have large differences in entry rates between boys and girls, perhaps reflecting tradition or learning preferences (see table 13). The core subjects do not feature because there is no element of choice about entering them, although more boys take separate sciences. It should be noted that boys made up 51% of the cohort for 2000 and 2001. One feature hidden by this analysis is that although boys make up 48% of the entry for English literature, only 77% of boys are entered compared with 85% of girls.

Annex E. Analysis of schools

In 2000, there were 202 maintained mixed schools where the average GCSE points score for boys was higher than it was for girls. Of these, two were boys' schools with just one or two girls and another had only nine pupils taking GCSE; these schools have been omitted from the following analysis. The remaining 199 schools represent a wide cross-section of schools nationally. However, only four of the schools achieved higher results with boys in all three years 1998/2000.

Schools where boys' GCSE results were similar to or better than girls 1998/2000

There were relatively few schools where boys' results were similar to or better than girls' in any given year. Of these, even fewer managed to sustain the results over a three-year period. An analysis was undertaken of the 50 schools where boys' average GCSE points compared most favourably with girls' for the years 1998 to 2000. Among these schools, compared with all schools nationally:

- a high proportion were small schools with fewer than 700 pupils
- a higher proportion of pupils were entitled to free school meals
- there was a higher proportion of pupils for whom English was an additional language
- there were more pupils with statements of special educational needs
- GCSE results were below average
- GCSE results among girls were more likely to be declining.

Schools where boys' GCSE results improved faster than girls' results 1998/2000

There were few schools where boys' results were similar to or better than girls in any given year and where boys' GCSE results were improving faster than girls'. A second analysis was undertaken of 50 schools where boys' results had improved between 1998 and 2000, where boys' results had improved relative to girls' two years running, and where girls' results had either improved or fallen back a little. Among these schools, compared with all schools nationally:

- a higher than expected proportion were small schools with fewer than 700 pupils
- a higher proportion of pupils was entitled to free school meals
- there were slightly more pupils with statements of special educational needs
- GCSE standards were a little below average.

Annex F. Further reading

Ofsted published a review of research in 1998 (see below). *Recent Research on Gender and Educational Performance* has sections devoted to: the size and nature of the gender gap; school organisation and processes; developmental and cultural processes; the agenda in schools; and recommendations. There are references to more than 250 other publications in the field.

The Department for Education and Skills has a web site devoted to gender issues at www.standards.dfes.gov.uk/genderandachievement. It includes a number of case studies, a comprehensive range of advice, and further references to research.

The National Literacy Trust web site has pages devoted to gender and literacy issues, research, case studies and resources. The pages can be found via www.literacytrust.org.uk/Database/boys/index.html.

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